

NOTES ON AUSTRALIAN BUPRESTIDAE, WITH DESCRIPTIONS OF THREE
NEW SPECIES AND TWO SUBSPECIES OF THE GENUS *STIGMODERA*,
SUBGENUS *CASTIARINA*.

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(Three Text-figures.)

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Synopsis.

The following are described as new: *Stigmodera (Castiarina) acuta*, *S. (C.) parvula*, and *S. (C.) violatra*. *Stigmodera (Themognatha) caerulans* is described as a variant of *S. mniszehi* Saund. and *S. (C.) roseipes* as a variant of *S. octospilota* L. & G. *S. (C.) rufipes* Macl. is reinstated as a distinct species.

Stigmodera mniszehi was described by Edw. Saunders in 1867 from specimens taken in coastal Western Australia (Perth to Geraldton), where it is found in October-November on the flowers of *Melaleuca*, in which it breeds. Forty years later another form of this insect was taken on the inland sand-plains of W.A. on the flowers of Mallee (*Eucalyptus stricta*), in which it breeds. The latter shows such clear and constant differences from the former, not only of colour and size, which are of minor importance in this amazingly variable genus, but of form and structure, that it deserves, I think, a subspecific name. Owing to its distinctive colour, *caerulans* seems to be an appropriate name. In proposing this I am expressing the opinion of two most competent entomologists, Horace Brown and the late John Clark.

The differences between the two forms are:

	<i>Stigmodera mniszehi</i> Saund.	<i>Stigmodera caerulans</i> Deuq. (subsp.).
Colour of pronotum ..	Nitid bronze (" thorace nitidissimo " (Snd.)).	Disc and anterior sides dark blue, posterior sides and margins brilliant metallic blue.
Elytra and scutellum	" Dark greenish black " (Snd.).	Shiny dark blue, with scutellum, basal margin and sutural anterior half bright metallic blue.
Form	Slightly flatter, much more rugose and more deeply sulcate over the whole surface of elytra, especially on shoulders.	More oval, more elongate, smoother on elytra and lower side of pronotum.
Underside	Black " subtus nitida " (Snd.).	Blue, epipleura with shiny cyaneous reflections.
Average dimensions ..	30 × 15½ mm.	35 × 16 mm.

When nearing the transverse sanguineous band near the apex, the blue area is produced in *S. caerulans* along the suture into an enlarged oval generally connected narrowly with the apical patch. I have not seen this ovate spot occurring in any of the *S. mniszehi* Saund. examined.

STIGMODERA (CASTIARINA) RUFIPES Macl.

Stigmodera rufipes was described by Macleay (*Ent. Soc. of N.S.W.*) in 1862. Although its morphological characteristics entitle this insect to a distinct species rank, it was unaccountably listed by Carter as a variety of *Stig. octospilota* L. & G.

Its shape and the markings of its pronotum alone make it easily distinguishable, and Dr. Obenberger appropriately but belatedly named it *S. stigmaticollis* in 1928.

Here are the most striking differences between the two insects:

	<i>Stigmodera octospilota</i> L. and G.	<i>Stigmodera rufipes</i> Macl.
Form	Broad, robust, ovate.	Narrower, more rectangular, moderately convex.
Head	Large yellow spot on centre.	Long narrow yellow vitta on centre.
Pronotum	Dark bronze with wide yellow margins.	Yellow margin extending thinly across the anterior part, a small medial yellow spot close to the front margin and a yellow vitta narrowly covering the medial sulcus on basal third.
Legs	Blue.	Blue except femora and lower part of tibiae, which are brick red.
Dimensions	14 × 6 mm.	14 × 5 mm.

STIGMODERA (CASTIARINA) OCTOSPILOTA L. & G., var. ROSEIPES Deuq.

In the New England district of New South Wales is to be found fairly commonly a variety of *octospilota* which shows constant differences from the species described in 1838 by Laporte (Comte de Castelnau) and Gory. These differences are: (1) Femora almost entirely brick-red. (2) The vermiculation between the three hindmost visible abdominal segments blue in both *octospilota* and *rufipes* is red in *roseipes*. (3) The elytral pattern is different: the dark blue antemedian fascia of *S. octospilota* L. & G. is reduced in *roseipes* to an arcuate longitudinal vitta extending from the base to the middle of the sides where it connects with the postmedian fascia. These differences are, I think, sufficiently important to justify the varietal name as above.

STIGMODERA (CASTIARINA) ACUTA, n. sp. (Text-fig. 1).

Elongata, acuminata. Capite thoraceque bronzeo-cyaneis; antennis et pedibus concoloribus. Elytra bronzeo-nitida. Sex maculae: prima et secunda basale, tertia et quarta post medium, flavae; quinq̄ et sexta prope apicem laete sanguineae. Apex bidentatus. Subtus nitido-cyanea, albo pubescens.

Elongate, acuminate. *Head and pronotum* bronzy with brilliant greenish reflections on basal area of pronotum and scutellum; *legs and antennae* dark blue. *Elytra* greenish-black with markings as follows: two subbasal oval spots not quite reaching the base; two narrower but slightly longer medial spots behind the former; two small oval antepical maculae connected with a sanguineous lateral mark extending to the sides and slightly produced downwards along the margin nearly as far as the apex. All maculae unconnected with the suture. Epipleural red spots brightly sanguineous.

Head deeply and widely excavated between the eyes, irregularly punctate, more densely so near base. *Prothorax* widest behind middle, apex subtruncate, base strongly bisinuate, posterior angles acutely produced, no trace of medial sulcus nor of basal fovea. The ♀ has near the posterior angle, on each side, a large almost round fovea above the scutellum. Disc minutely punctate, the punctures slightly deeper on the sides. *Scutellum* almost triangular, smooth. *Elytra* rather flat, sides subparallel, slightly sinuate behind middle, greatly and sharply attenuated to the shortly bispinose apex. With the ♀ the apices are more widely bilunate and the spines slightly longer, the external ones the more prominent. Striate-punctate, the striae outlined by neat regular costae, intervals flat and smooth.

Underside punctate, with a short silvery pubescence.

Dimensions: ♂, 13½ × 4 mm.; ♀, 15 × 5 mm.

Habitat: Acacia Plateau (northern N.S.W.) (Harold Davidson).

Type in Australian Museum, Sydney. Three examples (2 ♂, 1♀) of this fine species, which belongs to the beautiful *producta* Saund.-*spectabilis* Kerr. group, the latter being its nearest ally and from which it differs as follows:

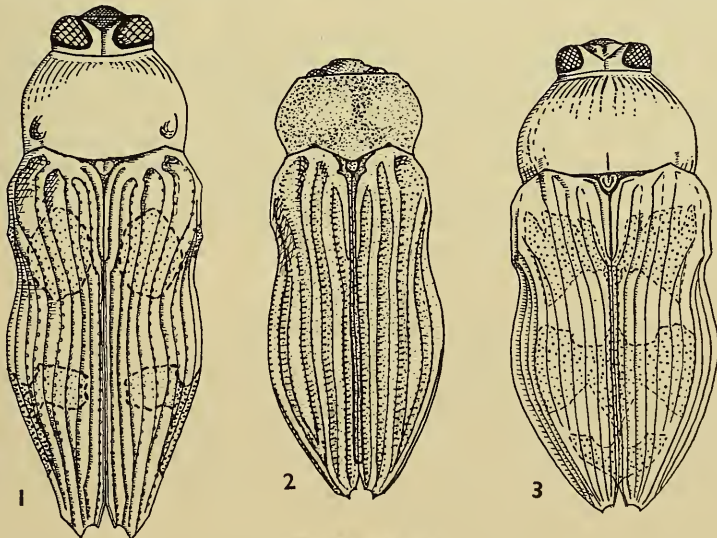
	<i>Stigmodera spectabilis</i> Kerr.	<i>Stigmodera acuta</i> Deuq.
Form	Convex, much broader.	Elongate, flatter, narrower.
Colour of head and pronotum.	Uniform very shiny blue.	Coppery with brilliant iridescence on apex and sides.
Scutellum	Brilliant blue.	Brassy.
Apices	Widely bidentate with sutural tooth shorter.	♂ very acuminate, minutely lunate, very short narrowly separated spines. ♀ wider lunula than ♂.

STIGMODERA (CASTIARINA) PARVULA, n. sp. (Text-fig. 2).

Elongata, capite et thorace bronzeo-cyaneis, longitudinaliter profunde in medio concavis; elytris rufis, interstitiis fortiter elevatis; sutura nigro-cyanea, pedibus ejusdem coloris. Apice bispinoso. Corpus subtus nigro-aenea, breviter albo pubescens.

Elongate, rectangular. *Head*, *pronotum* and *scutellum* dark blue with bronze reflections on disc. *Suture* bronzy black. *Elytra* brick-red. *Legs* and *underside* dark blue.

Head deeply furrowed longitudinally, closely punctate. *Prothorax* short, convex, almost straight at apex, arcuate at base, closely punctate, more thickly so at sides. *Disc* with deep medial sulcus and large depression on basal half; a small oblong fovea near



Text-figures 1-3.

1. *Stigmodera (Castiarina) acuta* (× 4.5). 2. *S. (C.) parvula* (× 8). 3. *S. (C.) violatra* (× 3.5).

the posterior angle on each side. *Sides* strongly rounded, posterior angles acutely produced. *Elytra* wider than *prothorax* at base, shoulders prominent, shortly narrowed sinuately, behind these, interstices conspicuously raised, apex slightly open at suture, bispinose, finely lunate with exterior spines more produced, striate-punctate.

Underside punctate, sparsely clothed with minute whitish hair.

Habitat: Armidale, N.S.W. (C. Deuquet).

Dimensions: 6½ × 2½ mm.

Stig. nanula Kerr. (1890), *S. canaliculata* Blkb. (1892) and *S. parvula* are undoubtedly very closely related, although differences between them are plain and constant. Nevertheless *canaliculata* and *parvula* could quite plausibly be regarded as variants of *nanula*, which is the oldest name. All three are much smaller than *Stig. erythroptera* Bois. I should also mention that a much smaller example of *erythroptera* than the N.S.W. prototype is found in various parts of Queensland.

Parvula differs from *nanula* Kerr. by the colour of its head, legs, antennae, the ground colour of elytra, less globose form and absence of large rounded apical macula, while *canaliculata* Blk. is a good deal smaller, has a bluish iridescence near each hind angle of pronotum, and is less attenuated at apex; it has besides, at the tip of each elytron, a definite black marking extending part way along the suture and gradually disappearing half way to scutellum, not found in *parvula*.

Type in Australian Museum, Sydney.

STIGMODERA (CASTIARINA) VIOLATRA, n. sp. (Text-fig. 3).

Convexa, navicularis. Rubra-sanguinea; capite, thorace, scutelloque splendide violaceis; elytris rubeis-sanguineis, tribus fasciis cyaneo-nigris, punctato-striatis, pedibus obscure purpureis. Subtus caerulea, modice punctata, dense pubescens.

Elongate, ovate, slightly attenuated towards apex. *Head*, pronotum and scutellum of brilliant bluish-purple colour. *Elytra* blood-red with two dark blue fasciae not extending to sides, the first, premedial, wide, narrowly reaching the suture, widening obliquely upwards and downwards and resembling in form two unfurled flags attached to the same pole; the second, postmedial, almost straight in front, slightly bifurcating at sides, produced laterally and expanding at suture into a small rounded mark; and a preapical lunulate mark unconnected with apex or lateral margins. (The elytral pattern of the ♂ example differs much from the ♀, its only markings being a small oblong postmedial spot on each elytron and a minute subtriangular preapical mark at lower end of suture.)

Head deeply channelled, densely punctate. *Prothorax* strongly convex with finely drawn medial line from apex to basal fovea, nearly straight at apex, more sinuate at base, anterior angles moderately produced, posterior with a shallow impression above each, two minute but clearly outlined calli on basal half, the disc closely punctate, more deeply so at sides, base with a shallow median lobe. *Elytra* slightly widened at shoulders and much so postmedially, then obliquely narrowed to apex; striae and intervals covered with small punctures, the latter unevenly; posterior margins finely serrated, apex with moderately wide oblique lunation, each elytron shortly bispinose, exterior spine slightly more protrusive.

Underside rather densely clothed with whitish hair.

Dimensions: ♀, 18 × 8 mm.; ♂, 16 × 6½ mm.

Habitat: The granite belt of Stanthorpe, south Queensland (Ed. Sutton).

This strikingly handsome buprest was first captured by Mr. Sutton and shortly afterwards by Mr. A. Gemmell, both enthusiastic and experienced entomologists of the Stanthorpe district. Three examples, one ♂ and two ♀, examined. The closest ally of this species is *Stig. indistincta* Saund., from which it clearly differs as follows: (1) larger and broader, more convex and ovate; (2) pronotum of entirely different colour; (3) pattern of elytral markings different, especially by the absence of elongated diamond-shaped spot below the scutellum.

Several species of *Stigmodera* show the same difference in sexual coloration (generally in the markings of the elytra) as that occurring in *Stig. violatra*. *Stigmodera maculiventris* Macl., *elegans* Geh., *discoidea* Cart., *punctatissima* Saund. are among the best known. This disparity of pattern has been the cause of many mistakes in past descriptions by unwary authors.

Type ♀ in the Australian Museum, Sydney. *Type* ♂ and one paratype ♀ in Coll. Gemmell.

To Miss P. Goodwin, of the Australian Museum, Sydney, I wish to express my cordial thanks for her excellent drawings.